

CLAIMS

What is claimed is:

1. A method for operating a data communication system, comprising steps of:

originating an electronic commerce transaction at a first party;

transmitting the electronic commerce transaction through the data communications network towards a second party;

during the step of transmitting, inputting the electronic commerce transaction to an electronic commerce transaction filter that is interposed between two network components; and

operating the electronic commerce transaction filter to take some action with respect to the electronic commerce transaction.

2. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is an analysis of the electronic commerce transaction for the purpose of collecting information across an administrative domain.

3. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is an analysis of the electronic commerce transaction for the purpose of enforcing a policy for an administrative domain.

4. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is a modification of the electronic commerce transaction.

5. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is a redirection of the electronic commerce transaction to a third party.

6. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is an extraction of information from the e-commerce transaction for recording the information for statistical or other purposes.

7. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is a verification of the authenticity of the electronic commerce transaction.

8. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is a verification of the authenticity of a component part of the electronic commerce transaction.

9. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is a verification that the electronic commerce transaction is in compliance with a regulation.

10. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is a verification that the electronic commerce transaction is in compliance with a standard.

11. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is a termination of the electronic commerce transaction.

12. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is a delay of the electronic commerce transaction.

13. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is an encryption of all or a part of the electronic commerce transaction, and sending the encrypted electronic commerce transaction to another destination.

14. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is generating an alert if an analysis performed by the electronic commerce transaction filter indicates that a certain filtering criterion is met.

15. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is passing the electronic commerce transaction through the electronic commerce transaction filter without modification and without recording any information regarding the electronic commerce transaction.

16. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is selected at least in part by applying predefined rules to the contents of one or more messages that comprise the electronic commerce transaction.

17. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is selected at least in part by applying predefined rules that are independent of the contents of one or more messages that comprise the electronic commerce transaction.

18. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is selected at least in part by applying predefined rules based on at least one of an origin or a destination of the electronic commerce transaction.

19. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is recording at least one predetermined type of

information, and further comprising steps of accumulating recorded information from a plurality of electronic commerce transactions, and making the accumulated recorded information available to interested parties.

20. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is recording at least one predetermined type of information, and further comprising steps of accumulating recorded information from a plurality of electronic commerce transactions, and deriving a filtering criterion from the accumulated recorded information for use in the same or in another electronic commerce transaction filter.

21. A method as in claim 1, wherein the step of operating is performed in parallel in a plurality of electronic commerce transaction filters that are disposed between two layers of an administrative domain hierarchy.

22. A method as in claim 1, wherein the step of operating comprises an initial step of decrypting all or part of the electronic commerce transaction.

23. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is an encryption of all or a part of the electronic commerce transaction using at least one cryptographic key, and further comprising a step of sending the at least one cryptographic key to another location.

24. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is a verification that the electronic commerce transaction is in compliance with a predetermined policy.

25. A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is determining whether the electronic commerce transaction may be fraudulent.

26. A data communication system, comprising:

a first party for originating an electronic commerce transaction and for transmitting the electronic commerce transaction through a data communications network towards a second party; and

an electronic commerce transaction filter that is transparently interposed between two data communication network components, said filter operating on the electronic commerce transaction in accordance with at least one filter criterion for taking some action with respect to the electronic commerce transaction.

27. A method of conducting business over the Internet, wherein parties interact by originating an electronic commerce transaction at a first party and transmitting the electronic commerce transaction through the Internet to a second party, the method comprising steps of:

intercepting the electronic commerce transaction with an electronic commerce transaction filter that is interposed between two data communication network components; and

operating the electronic commerce transaction filter in accordance with at least one filter criterion so as to record at least one predetermined type of information, and further comprising steps of accumulating recorded information from a plurality of electronic commerce transactions, and making the accumulated recorded information available to interested parties.

28. A method of conducting business over the Internet, wherein parties interact by originating an electronic commerce transaction at a first party and transmitting the electronic commerce transaction through the Internet to a second party, the method comprising steps of:

intercepting the electronic commerce transaction with an electronic commerce transaction filter that is interposed between two data communication network components; and

operating the electronic commerce transaction filter in accordance with at least one filter criterion to record at least one predetermined type of information, and further comprising steps of accumulating recorded information from a plurality of electronic commerce transactions, deriving a new or a modified filtering criterion from the accumulated recorded information, and further comprising a step of offering the new or modified filtering criterion for use by another electronic commerce transaction filter.

29. A method of conducting business over the Internet, wherein parties interact by originating an electronic commerce transaction at a first party and transmitting the electronic commerce transaction through the Internet to a second party, where the electronic commerce transaction comprises an acceptance of an offer to provide goods or services based on stipulated terms; the method comprising steps of:

intercepting the electronic commerce transaction with an electronic commerce transaction filter that is interposed between two data communication network components;

redirecting the intercepted electronic commerce transaction to a third party; and

providing the third party the opportunity to provide the goods or services for the stipulated terms or for other terms related to the stipulated terms.

30. A method as in claim 29, wherein the step of providing enables the third party to provide the goods or services for a price that is either less than or greater than a price set by the stipulated terms.

31. A computer-readable medium comprising computer program instructions for directing a computer to execute a method having steps of, in response to originating an electronic commerce transaction at a first party and transmitting the electronic commerce transaction through a data communications network towards a second party, inputting the electronic commerce transaction to an electronic commerce transaction filter that is transparently interposed between two network components; and operating the electronic commerce transaction filter to take some action with respect to the electronic commerce transaction in accordance with at least one filter criterion.